RESPONSE TO COMMENTS

Ahsahka Water and Sewer District
Wastewater Treatment Plant
NPDES Permit # ID-002522-4

On November 18, 2010, the U.S. Environmental Protection Agency (the EPA) issued a public notice for the proposed reissuance of the Ahsahka Water and Sewer District Wastewater Treatment Plant draft National Pollutant Discharge Elimination System (NPDES) Permit No. ID- 002522-4. This Response to Comments provides a summary of significant comments and provides corresponding responses from the EPA. Where indicated, the EPA has made appropriate changes to the final NPDES Permit.

Comments were received from the following:

Justin Hayes, Program Director, Idaho Conservation League (ICL)

1. Comment

ICL commented that the draft permit violates the antidegradation policy by authorizing discharges that would degrade water quality. In particular:

A. For purposes of complying with antidegradation review, the baseline should be existing water quality, not the previous effluent limits. The draft permit reauthorizes the current discharge limits, which are based on the design flow of the wastewater treatment plant. The design flow of the facility is 0.08 million gallons per day (mgd), whereas the average discharge is 0.02 mgd.
B. The draft permit does not contain an analysis to support increased discharges.
C. The EPA should develop limits that "lock in" the impacts caused by the facility's discharge at the actual level of discharge.

Response

The EPA disagrees with this comment. Based on the EPA's antidegradation evaluation, the EPA concludes that issuance of this permit will not lower water quality in either Tribal or downstream State waters.

The EPA is required under Section 301(b)(1)(C) of the Clean Water Act (CWA) and implementing regulations (40 CFR 122.4(d) and 122.44(d)) to establish conditions in NPDES permits that ensure compliance with State or Tribal water quality standards, including antidegradation requirements. This permit will be issued to a facility that is located on the Nez Perce Reservation and discharges to Tribal waters. The Nez Perce Tribe has not applied for the status of Treatment as a State (TAS) from the EPA for purposes of the Clean Water Act. Since the Nez Perce Tribe does not have TAS, EPA evaluated the facility's discharge consistent with the Idaho Water Quality Standards (WQS) to ensure that the effluent limits will meet the downstream State's water quality standards in both the Tribal and State waters. Further, since the EPA evaluated the discharge consistent with Idaho's WQS, the EPA utilized IDEQ's

antidegradation implementation procedures as guidance to determine whether Idaho's antidegradation water quality standard has been met. The border with the State of Idaho waters is located 30 miles downstream from the facility.

Determining the Applicable Level of Protection

Under the Idaho Water Quality Standards, the level of antidegradation protection applicable to a waterbody depends upon whether the waterbody is "high quality," that is to say, whether the quality of the waters exceeds levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water (IDAPA 58.01.02.051.02). If the waterbody is high quality, then the receiving water receives Tier 2 antidegradation protection in addition to Tier 1 protection. All waters receive Tier 1 protection (IDAPA 58.01.02.052.01). Section 39-3603(2)(b) of the Idaho Code governs how IDEQ determines whether Tier 2 antidegradation protection is appropriate for a given waterbody. EPA used this same approach when establishing conditions in this permit that are consistent with the State of Idaho's antidegradation policy and implementation methods.

The Ahsahka facility discharges to assessment unit ID17060306CL021_06. This segment of the Clearwater River is not assessed in Idaho's 2008 303(d)/305(b) integrated report (which is the most recent federally approved integrated report). According to Section 39-3603(2)(b) of the Idaho Code, "water bodies identified in the Integrated Report as not assessed will be provided an appropriate level of protection on a case-by-case basis using information available at the time of a proposal for a new or reissued permit or license." To be conservative, EPA considered the Clearwater River assessment unit a high quality water related to aquatic life and recreational uses for the purposes of this antidegradation review. Therefore, EPA will provide Tier 2 protection, in addition to Tier 1, for both aquatic life and recreational beneficial use.

Protection of Existing Uses or Tier 1 Protection (IDAPA 58.01.02.051.01)

The discharge is to the Clearwater River, Lolo Creek to North Fork Clearwater River. This segment is designated for the following designated beneficial uses: domestic water supply, cold water biota, primary contact recreation, salmonid spawning and special resource water. The effluent limits in the draft permit ensure compliance with IDEQ numeric and narrative water quality criteria. The numeric and narrative water quality criteria are set at levels that ensure protection of the designated uses.

As there is no information indicating the presence of existing beneficial uses other than those that are designated, the draft permit ensures a level of water quality necessary to protect the designated uses and ensures that the level of water quality necessary to protect existing uses is maintained and protected.

High Quality Waters or Tier 2 Protection Uses (IDAPA 58.01.02.051.02)

In order to determine whether degradation will occur, EPA evaluated the effect on water quality of the issuance of the permit for each pollutant that is relevant to aquatic life use and the recreation use. These include: BOD, TSS, chlorine, pH, ammonia, and E. coli. Effluent limits are set in the proposed and existing permit for all these pollutants except ammonia. For a reissued permit, the effect on water quality

is determined by looking at the difference in water quality that would result from the activity or discharge as authorized in the current permit and the water quality that would result from the activity or discharge as proposed in the reissued permit or license. (IDAPA 58.01.02.052.04a) The calculation takes into account dilution using appropriate mixing of the receiving water under critical conditions coupled with the design flow (not the actual flow) of the facility. For pollutants that are currently limited and will have limits under the reissued permit, the current discharge quality is based on the limits in the current permit and the future discharge quality is based on the proposed permit limits. The proposed permit limits for all of these pollutants are the same as those in the current permit. Moreover, for E. coli (the only parameter that has been assigned water quality criteria to protect recreational uses), the effluent limits are set to meet criteria at the end of pipe, and these limits are identical to the limits in the prior permit.

Therefore, EPA concludes there will be no lowering of water quality with respect to these parameters, thus there is no need for further Tier 2 analysis.

2. Comment

Compliance with Reasonable Potential based limits does not equal compliance with antidegradation

Response

The EPA agrees. The EPA evaluated compliance with antidegradation independently. *See* Response to Comment 1.

3. Comment

The draft permit fails to provide effluent limits for all relevant pollutants (ammonia and phosphorus).

Response

The EPA evaluated the effect on water quality for monitored pollutants of concern in the discharge without permit limits. Under the prior permit cycle, the permittee was required to monitor for ammonia.

The EPA is required to include effluent limits in a permit where there is a reasonable potential for a pollutant in the discharge to violate water quality standards. 40 CFR 122.44(d); see also Technical Support Document for Water Quality-based Toxics Control (TSD) at p. 56. As shown on pages 21 and 25 of the Fact Sheet, the EPA used TSD procedures, critical conditions and considered dilution in determining reasonable potential to violate the water quality criterion for ammonia. The calculations show that there is not a reasonable potential to violate the ammonia water quality criterion; therefore, effluent limits are not required. Based on the reasonable potential evaluation(see Appendix B of the fact sheet), the EPA determined that there is no reasonable potential, consistent with 40 C.F.R. 122.44, for the facility's discharge to exceed numeric water quality criteria for ammonia.

Nor is inclusion of an ammonia effluent limit required to ensure that water quality is not lowered with issuance of the final permit. The EPA's review of the permit application and the discharge monitoring

report data indicate no anticipated changes in the design flow, actual flow or treatment processes that could result in a new or increased discharge of ammonia. Therefore, since there is no basis to believe that issuance of this permit will result in the discharge of increased concentrations or loadings of ammonia, the draft permit ensures a level of water quality necessary to protect the designated uses and ensures that the level of water quality necessary to protect existing uses is maintained and protected. *See* Response to Comment 1 concerning the antidegradation analysis. EPA has continued the ammonia monitoring requirement in the current final permit. EPA can use these data in the next permit issuance to determine whether an effluent limit is required for ammonia.

The EPA did not include monitoring or effluent limits for phosphorus in the prior permit or final permit. Page 48 of the TSD addresses narrative criteria such as phosphorus. Specifically, limits are required "once the permitting authority determines that one or more specific chemicals in an effluent must be controlled." The EPA has no reason to believe that the facility is discharging phosphorus at levels that would cause or contribute to an exceedance of phosphorus standard. Further, the EPA has no basis to believe that issuance of this permit will result in the discharge of increased concentrations or loadings of phosphorus.

The facility does not discharge to a receiving water that is 303(d) listed for nutrients. Concentrations of phosphorus in the Clearwater River in the vicinity of the discharge are low (less than 0.050 mg/L). Based on a design flow of 0.08 mgd and a harmonic mean flow of 1900 mgd in the Clearwater River, there is available assimilative capacity in the receiving water. Assuming phosphorus concentrations of 3.7 mg/L from Ahsahka the discharge loading of phosphorus represents a small fraction of the average instream nutrient load (less 0.13 percent). Therefore, EPA has no reason to believe that the facility is discharging phosphorus at levels that would cause or contribute to an exceedance of the water quality standard.

The EPA's review of the permit application and the discharge monitoring report data indicate no anticipated changes in the design flow, actual flow or treatment processes that could result in a new or increased discharge of phosphorus. Therefore, since there is no basis to believe that issuance of this permit will result in the discharge of increased concentrations or loadings of phosphorus, the draft permit ensures a level of water quality necessary to protect the designated uses and ensures that the level of water quality necessary to protect existing uses is maintained and protected.

4. Comment

With regard to the Chlorine mixing zone, we are a little surprised to see that "Max effluent conc. measured" is reported as 1.07 mg/L. This is quite high. In a previous section of the fact sheet there is a discussion of "Compliance History.15" A chlorine discharge of 1.07 mg/L would be a violation of the permit limits and should be noted there. Since it is not, we wonder if the number reported in the mixing zone spreadsheet is a typo.

Response

The maximum effluent concentration used to determine the reasonable potential to violate the water quality standards under critical conditions is not a typographical error and is reported on page 6 of the Ahsahka Fact Sheet:

"Total residual chlorine

Violations of the monthly average limit of 0.5 mg/L, at 0.633 and 0.585 during 2008; and 0.6, 1.07, and 0.69 during 2009; and 0.53 in January 2010."